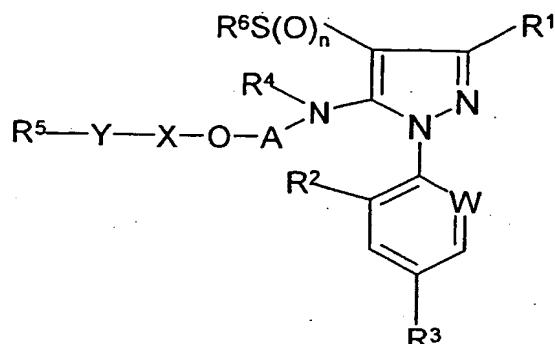


CLAIMS

1. A compound of formula (I):



5

(I)

wherein:

R¹ is CN, CSNH₂ or C(=N-Z)-S(O)_r-Q;

Z is H, (C₁-C₆)-alkyl, (C₁-C₆)-haloalkyl, (C₃-C₆)-alkenyl, (C₃-C₆)-alkynyl, -(CH₂)_qR⁷,

10 COR⁸, CO₂-(C₁-C₆)-alkyl or S(O)_pR⁸;

Q is (C₁-C₆)-alkyl or CH₂R⁷;

W is C-halogen, C-CH₃ or N;

R² is hydrogen, halogen or CH₃;

R³ is (C₁-C₃)-haloalkyl, (C₁-C₃)-haloalkoxy or SF₅;

15 R⁴ is hydrogen, (C₂-C₆)-alkenyl, (C₂-C₆)-haloalkenyl, (C₂-C₆)-alkynyl, (C₂-C₆)-haloalkynyl, (C₃-C₇)-cycloalkyl, (C₃-C₇)-cycloalkyl-(C₁-C₆)-alkyl, CO₂-(C₁-C₆)-alkyl, CO₂-(C₃-C₆)-alkenyl, CO₂-(C₃-C₆)-alkynyl, CO₂-(CH₂)_mR⁷ or SO₂R⁸; or (C₁-C₆)-alkyl unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₆)-alkoxy, (C₁-C₆)-haloalkoxy, (C₃-C₆)-alkenyloxy, (C₃-C₆)-haloalkenyloxy, (C₃-C₆)-alkynyloxy, (C₃-C₆)-haloalkynyloxy, (C₃-C₇)-cycloalkyl, S(O)_pR⁸, CN, NO₂, OH, COR⁹, NR⁹R¹⁰, S(O)_pR⁷, OR⁷ and CO₂R⁹;

20 A is (C₁-C₆)-alkylene or (C₁-C₆)-haloalkylene;

X is C(=O), C(=S) or SO₂;

Y is O, NR¹¹ or a covalent bond;

25 R⁵ is (C₃-C₆)-alkenyl, (C₃-C₆)-haloalkenyl, (C₃-C₆)-alkynyl, (C₃-C₆)-haloalkynyl, (C₃-C₇)-cycloalkyl, (C₃-C₇)-cycloalkyl-(C₁-C₆)-alkyl, -(CH₂)_qR⁷ or -(CH₂)_qR¹²; or is (C₁-

C₆)-alkyl unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₆)-alkoxy, (C₁-C₆)-haloalkoxy, (C₃-C₆)-alkenyloxy, (C₃-C₆)-haloalkenyloxy, (C₃-C₆)-alkynyoxy, (C₃-C₆)-haloalkynyoxy, (C₃-C₇)-cycloalkyl, S(O)_pR⁸, CN, NO₂, OH, COR⁹, NR⁹R¹⁰, S(O)_pR⁷, OR⁷ and CO₂R⁹;

5 R⁶ is (C₁-C₆)-alkyl, (C₁-C₆)-haloalkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-haloalkenyl, (C₂-C₆)-alkynyl or (C₂-C₆)-haloalkynyl;

R⁷ is phenyl unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₆)-alkyl, (C₁-C₆)-haloalkyl, (C₁-C₆)-alkoxy, (C₁-C₆)-haloalkoxy, CN, NO₂, S(O)_pR⁸, COR¹⁰, COR¹³, CONR⁹R¹⁰, SO₂NR⁹R¹⁰, NR⁹R¹⁰

10 and OH;

R⁸ is (C₁-C₆)-alkyl or (C₁-C₆)-haloalkyl;

R⁹ and R¹⁰ are each independently H, (C₁-C₆)-alkyl, (C₁-C₆)-haloalkyl, (C₃-C₆)-alkenyl, (C₃-C₆)-haloalkenyl, (C₃-C₆)-alkynyl, (C₃-C₆)-cycloalkyl or -(C₁-C₆)-alkyl-(C₃-C₆)-cycloalkyl; or

15 R⁹ and R¹⁰ together with the attached N atom form a five- or six-membered saturated ring which optionally contains an additional hetero atom in the ring which is selected from O, S and N, the ring being unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₆)-alkyl and (C₁-C₆)-haloalkyl;

20 R¹¹ is H, (C₁-C₆)-alkyl, (C₁-C₆)-haloalkyl, (C₃-C₆)-alkenyl or (C₃-C₆)-alkynyl;

R¹² is heterocyclyl unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₄)-alkyl, (C₁-C₄)-haloalkyl, (C₁-C₄)-alkoxy, (C₁-C₄)-haloalkoxy, NO₂, CN, CO₂(C₁-C₆)-alkyl, S(O)_pR⁸, OH and oxo;

R¹³ is phenyl unsubstituted or substituted by one or more radicals selected from the

25 group consisting of halogen, (C₁-C₆)-alkyl, (C₁-C₆)-haloalkyl, (C₁-C₆)-alkoxy, (C₁-C₆)-haloalkoxy, CN, NO₂, S(O)_pR⁸ and NR⁹R¹⁰;

n, p and r are each independently zero, one or two;

m and q are each independently zero or one; and

each heterocyclyl in the above-mentioned radicals is independently a heterocyclic radical having 3 to 7 ring atoms and 1, 2 or 3 hetero atoms in the ring selected from the group consisting of N, O and S;

30 or a pesticidally acceptable salt thereof.

2. A compound or a salt thereof as claimed in claim 1 wherein R¹ is CN or CSNH₂.

5 3. A compound or a salt thereof as claimed in claim 1 or 2 wherein R⁶ is CF₃.

4. A compound or a salt thereof as claimed in claim 1, 2 or 3 wherein R¹ is CN, CSNH₂ or C(=N-Z)-S-Q;

Z is H, (C₁-C₃)-alkyl, -(CH₂)_qR⁷, COR⁸, CO₂-(C₁-C₃)-alkyl or S(O)_pR⁸;

10 Q is (C₁-C₃)-alkyl;

W is C-Cl;

R² is Cl;

R³ is CF₃;

R⁴ is hydrogen, (C₂-C₄)-alkenyl, (C₂-C₄)-alkynyl, (C₃-C₇)-cycloalkyl, CO₂-(C₁-

15 C₄)-alkyl, CO₂-(C₃-C₄)-alkenyl, CO₂-(C₃-C₄)-alkynyl, CO₂-(CH₂)_mR⁷ or SO₂R⁸; or
(C₁-C₃)-alkyl unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₃)-alkoxy, S(O)_pR⁸ and CO₂-(C₁-C₃)-alkyl);

A is -CH₂CH₂- or -CH₂CH₂CH₂-;

X is C(=O) or SO₂;

20 Y is O, NH or a covalent bond;

R⁵ is (C₃-C₄)-alkenyl, (C₃-C₄)-alkynyl, -(CH₂)_qR⁷, (C₁-C₃)-alkyl or (C₁-C₃)-haloalkyl;

R⁶ is CF₃;

each R⁷ is independently phenyl unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₃)-alkyl, (C₁-C₃)-

25 haloalkyl, (C₁-C₃)-alkoxy, (C₁-C₃)-haloalkoxy, CN, NO₂ and S(O)_pR⁸; and
each R⁸ is independently (C₁-C₃)-alkyl or (C₁-C₃)-haloalkyl.

5. A compound or a salt thereof as claimed in any one of claims 1 to 4 wherein R¹ is CN or CSNH₂;

30 W is C-Cl;

R² is Cl;

R³ is CF₃;

R⁴ is (C₁-C₃)-alkyl;

A is -CH₂CH₂- or -CH₂CH₂CH₂-;

X is C(=O);

Y is O, NH or a covalent bond;

5 R⁵ is (C₃-C₄)-alkenyl, (C₃-C₄)-alkynyl, -(CH₂)_qR⁷, (C₁-C₃)-alkyl or (C₁-C₃)-haloalkyl;

R⁶ is CF₃;

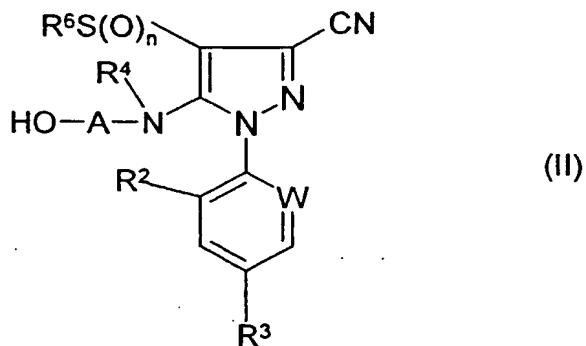
R⁷ is phenyl unsubstituted or substituted by one or more radicals selected from the group consisting of halogen, (C₁-C₃)-alkyl, (C₁-C₃)-haloalkyl, (C₁-C₃)-alkoxy, (C₁-C₃)-haloalkoxy, CN, NO₂ and S(O)_pR⁸; and

10 R⁸ is (C₁-C₃)-alkyl or (C₁-C₃)-haloalkyl.

6. A process for the preparation of a compound of formula (I) or a salt thereof as defined in any one of claims 1 to 5, which process comprises:

a) where R², R³, R⁴, R⁵, R⁶, W, A and n are as defined in claim 1, R¹ is CN, and

15 Y and X are as defined in claim 1 with the exclusion of compounds in which -Y-X- is -NH-CO- or -NH-CS-, acylating or sulfonylating a compound of formula (II):



wherein R², R³, R⁴, R⁶, W, A and n are as defined in formula (I), with a compound of formula (III):



wherein Y and X are as defined in formula (I) with the exclusion of compounds in which -Y-X- is -NH-CO- or -NH-CS-, and L is a leaving group; or

b) where R¹ is CN, and R², R³, R⁴, R⁵, R⁶, W, A and n are as defined in claim 1, reacting a compound of formula (II) wherein R¹, R², R³, R⁶, W, A and n are as defined in claim 1 and -Y-X- is -NH-CO- or -NH-CS-, with an isocyanate or isothiocyanate compound of formula (IV) or (V):



wherein R^5 is as defined in formula(I); or

- 5 c) where R^1 is CN , n is 1 or 2, and $\text{R}^2, \text{R}^3, \text{R}^4, \text{R}^5, \text{R}^6, \text{W}, \text{A}, \text{X}$ and Y are as defined in claim 1, oxidising a corresponding compound in which n is 0 or 1; or
- d) where R^1 is CSNH_2 , and $\text{R}^2, \text{R}^3, \text{R}^4, \text{R}^5, \text{R}^6, \text{W}, \text{A}, \text{X}, \text{Y}$ and n are as defined in claim 1, reacting the corresponding compound of formula (I) wherein R^1 is CN , with an alkali or alkaline earth metal hydrosulfide, or with the reagent Ph_2PS_2 ; or
- 10 (e) where R^1 is CSNH_2 , and $\text{R}^2, \text{R}^3, \text{R}^4, \text{R}^5, \text{R}^6, \text{W}, \text{A}, \text{X}, \text{Y}$ and n are as defined in claim 1, reacting the corresponding compound of formula (I) wherein R^1 is CN , with a bis(trialkylsilyl)sulfide, in the presence of a base; or
- (f) where R^1 is $\text{C}(\text{=N-H})\text{-S-Q}$, and $\text{Q}, \text{R}^2, \text{R}^3, \text{R}^4, \text{R}^5, \text{R}^6, \text{W}, \text{A}, \text{X}, \text{Y}$ and n are as defined in claim 1, reacting the corresponding compound of formula (I) wherein R^1 is CSNH_2 with an alkylating agent of formula (VI) or (VII):



wherein Q is as defined in formula (I) and L^1 is a leaving group; or

- (g) where R^1 is $\text{C}(\text{=N-Z})\text{-S-Q}$, Z is as defined in claim 1 with the exclusion of H , and the other values are as defined in formula (I), alkylating, acylating or

20 sulfonylating the corresponding compound of formula (I) wherein Z is H , with a compound of formula (VIII):



wherein Z is as defined in formula (I) with the exclusion of H , and L^2 is a leaving group; and

- 25 (h) if desired, converting a resulting compound of formula (I) into a pesticidally acceptable salt thereof.

7. A pesticidal composition comprising a compound of formula (I) or a pesticidally acceptable salt thereof as defined in any one of claims 1 to 5, in association with a pesticidally acceptable diluent or carrier and/or surface active agent.

8. The use of a compound of formula (I) or a salt thereof according to any one of claims 1 to 5 or of a composition according to claim 7, for the preparation of a veterinary medicament.

5 9. The use of a compound of formula (I) or a salt thereof according to any one of claims 1 to 5 or of a composition according to claim 7, for the control of pests.

10. A method for controlling pests at a locus which comprises applying thereto an effective amount of a compound of formula (I) or a salt thereof as claimed in any
10 one of claims 1 to 5 or of a composition according to claim 7.